

ABSTRACT

Component Testing System
Vacuum Ring and Test Plate Construction

[42.00] A vacuum ring on a component testing system includes a metallic base material defining a vacuum-communicating passageway. A ceramic layer on the base material, preferably 20-100 micrometers thick and formed by a micro-arc oxidation process resulting in molecular adhesion, improves abrasion resistance and makes the vacuum ring more arc-over proof. A test plate for holding DUTs includes such a ceramic layer that provides better wear while enabling use of the base as a guard layer during testing. Another aspect of the invention concerns a vacuum ring having an eject hole pattern for discharging compressed gas toward DUTs in order to eject DUTs from a test plate. The eject hole pattern includes a plurality of closely spaced apart holes, each measuring less than the size that would be large enough to receive a DUT having the predetermined minimum cross sectional area.